



Edward Via College of Osteopathic Medicine

MED 8060/MED 8065

Clinical Geriatric Medicine and Geriatric Modules

Academic Year 2019 - 2020

ROTATION SYLLABUS



**Mark Sanders, D.O., JD,
MPH, LLM, FACOFP**

Chair, Geriatrics

Auburn Campus

Phone: 334-442-4013

msanders@auburn.vcom.edu



**Edward Warren, M.D.,
CMD, FAAFP**

Chair, Geriatrics

Carolinas Campus

Phone: 864-327-9828

ewarren@carolinas.vcom.edu



Richard Williams, M.D.

Chair, Geriatrics

Virginia Campus

Phone: 540-231-3164

rwilliams@vcom.vt.edu

I. Rotation Description

The Mission of the Edward Via College of Osteopathic Medicine (VCOM) is "to provide medical education and research that prepares globally minded, community-focused physicians and to improve the health of those most in need." Among the goals of the college include the education of students on their responsibilities to be professional, ethical, dutiful, compassionate, and knowledgeable and the emphasis of patient-centered care, collaborative approaches to care, and a sense of community responsibility throughout the curriculum to prepare the student for practicing in rural and underserved areas. Southwestern Virginia, particularly the Roanoke Valley and far Southwest Virginia, has a population that is older than the nation's average. Considering this demographic reality in light of the mission of the college, one can understand the prominence that Geriatric Medicine plays in the curriculum at VCOM.

During the third year geriatrics rotation, students expand their knowledge of Geriatric Medicine conditions and gain the ability to apply this knowledge in the clinical setting. The curriculum is taught through VCOM TV on-line lectures, modules and presentation, assigned readings, grand rounds, and through one-on-one student-preceptor experience in caring for patients in the clinical setting. The practice of geriatric medicine occurs in the outpatient office setting, in long-term care facilities and in the inpatient setting. Due to the variety of practice opportunities and formats in geriatric medicine, students should review their [specific site instructions](#) for a more detailed description of their specific practice setting.

II. Course Goals and Objectives

A. Goals of the Course

The primary goals for the geriatric rotation are three fold. First, to enjoy a fruitful and fulfilling career the physician must look forward to awaking each day, proceeding forward with the outlook that each day is a gift with many rewarding, challenging and personal growth experiences. Secondly the continual addition of knowledge is necessary to provide excellent patient care and personal life long growth fulfillment. Third each task must have a measurable goal or marker that the task was successfully completed. With the above thoughts the goals for the geriatric rotation is to: provide and enjoyable experience with significant addition of medical knowledge that culminates with the successful completion of the final geriatric exam.

B. Clinical Performance Objectives

While the end-of-rotation exam is derived from the didactic curriculum and objectives described above in the “Clinical Modules – Required Curriculum” section, the end-of-rotation evaluation completed by your preceptor is based on clinical core competencies. These core competencies reflect student performance in 6 key areas: communication, problem solving, clinical skills, medical knowledge, osteopathic medicine and professional and ethical considerations. Your end-of-rotation evaluation from your preceptor will be based directly on your performance in these 6 core competencies as described below.

1. **Communication** - the student should demonstrate the following clinical communication skills:
 - a. Effective listening to patient, family, peers, and healthcare team
 - b. Demonstrates compassion and respect in patient communications
 - c. Effective investigation of chief complaint, medical and psychosocial history specific to the rotation
 - d. Considers whole patient: social, spiritual & cultural concerns
 - e. Efficiently prioritizes essential from non-essential information
 - f. Assures patient understands instructions, consents & medications
 - g. Presents cases in an accurate, concise, well organized manner
2. **Problem Solving** – the student should demonstrate the following problem solving skills:
 - a. Identify important questions and separate data in organized fashion organizing positives & negatives
 - b. Discern major from minor patient problems
 - c. Formulate a differential while identifying the most common diagnoses
 - d. Identify indications for & apply findings from the most common radiographic and diagnostic tests
 - e. Identify correct management plan considering contraindications & interaction
3. **Clinical Skills** - the student should demonstrate the following problem solving skills:
 - a. Assesses vital signs & triage patient according to degree of illness
 - b. Perform good auscultatory, palpatory & visual skills
 - c. Perform a thorough physical exam pertinent to the rotation
4. **Osteopathic Manipulative Medicine** - the student should demonstrate the following skills in regards to osteopathic manipulative medicine
 - a. Apply osteopathic manipulative medicine successfully when appropriate
 - b. Perform and document a thorough musculoskeletal exam
 - c. Utilize palpatory skills to accurately discern physical changes that occur with various clinical disorders
 - d. Apply osteopathic manipulative treatments successfully

5. **Medical Knowledge** – the student should demonstrate the following in regards to medical knowledge
 - a. Identify & correlate anatomy, pathology and pathophysiology related to most disease processes
 - b. Demonstrate characteristics of a self-motivated learner including demonstrating interest and enthusiasm about patient cases and research of the literature
 - c. Are thorough & knowledgeable in researching evidence based literature
 - d. Actively seek feedback from preceptor on areas for improvement
 - e. Correlate symptoms & signs with most common disease
6. **Professional and Ethical Behaviors** - the student should demonstrate the following professional and ethical behaviors and skills:
 - a. Is dutiful, arrives on time & stays until all tasks are complete
 - b. Consistently follows through on patient care responsibilities
 - c. Accepts & readily responds to feedback, is not resistant to advice
 - d. Assures professionalism in relationships with patients, staff, & peers
 - e. Displays integrity & honesty in medical ability and documentation
 - f. Acknowledges errors, seeks to correct errors appropriately
 - g. Is well prepared for and seeks to provide high quality patient care
 - h. Identifies the importance to care for underserved populations in a non-judgmental & altruistic manner

III. Rotation Design

A. Educational Modules

Educational modules using lectures, cases, and other forms of delivery are used for third year curriculum. Each student must complete a post-rotation exam to assure that the expected basic content or medical knowledge has been acquired during the rotation. In addition to the experiences received in the clinical training sites, students are expected to read the content of the assigned textbooks and on line materials in order to complete the entire curriculum assigned for the clinical module.

B. Formative Evaluation

Student competency based rating forms are used by the preceptor to evaluate each student's clinical skills and the application of medical knowledge in the clinical setting. These forms are only completed by the clinical faculty member or preceptor. Performance on rotations will be evaluated by the primary clinical faculty member precepting the student. VCOM uses a competency based evaluation form which includes the osteopathic core competencies. These competencies evaluated include:

- a. Medical knowledge;
- b. Communication;
- c. Physical exam skills;
- d. Problem solving and clinical decision making;
- e. Professionalism and ethics;
- f. Osteopathic specific competencies; and
- g. Additional VCOM values.

Student competency is judged on clinical skill performance. Each skill is rated as to how often the student performs the skill appropriately (i.e. unacceptable, below expectation, meets expectation, above expectation, exceptional).

C. Logging Patient Encounters and Procedures

Students are required to maintain a log to identify the procedures performed and the number of essential patient encounters in the CREDO application. All students must review these logs with their preceptors prior to the end of the rotation period, as required by the final preceptor evaluation form. Students are encouraged to periodically review their CREDO entries with their preceptor during the rotation period.

IV. Credits

5 credit hours

V. Course Texts

A. Required Textbooks

- Kane, R., Ouslander, J., Abrass, I., & Resnick, B. (2009). *Essentials of clinical geriatrics* (6th ed.). McGraw-Hill. ISBN-13: 978-0071498227
Available in electronic format on the VCOM Library – on R2 Library, Archives
- Halter, J. B., Ouslander, J. G., Studenski, S., High, K. P., Asthana, S., Supiano, M. A., & Ritchie, C. S. (2017). *Hazzard's: Geriatric Medicine and Gerontology* (7th ed.). McGraw-Hill. ISBN-13: 978-0071833455
Available in electronic format on the VCOM Library-on Access Medicine
- Kuchera, M. & Kuchera, W. (1994). *Osteopathic considerations in systemic dysfunction* (Rev 2nd ed.). Dayton, OH: Greyden Press. ISBN: 978-1570741548
- American Osteopathic Association, & Chila, A. *Foundations of osteopathic medicine* (3rd ed.). Baltimore, MD: Lippincott Williams & Wilkins. ISBN: 978-0781766715
Available in electronic format on the VCOM Library – on LWW Osteopathic Medicine Collection
- Storey, P. (2004). *Unipac, Vol. 1: The hospice/palliative medicine approach to end-of life care*. Mary Ann Liebert Publishing. ISBN-13: 978-0913113264
Available in electronic format on the VCOM Library

B. Recommended Textbooks

- Doherty, G. (2010). *CURRENT diagnosis and treatment: Surgery* (13th ed.). McGraw Hill: Lange. ISBN-13: 978-0071635158
- Skinner, H., & McMahan, P. (2006). *CURRENT diagnosis and treatment in orthopedics* (4th ed.). McGraw Hill: Lange. ISBN-13: 978-0071438339

VI. Course Grading and Requirements for Successful Completion

A. Requirements

- Attendance according to VCOM and preceptor requirements as defined in the [College Catalog and Student Handbook](#).
- Completion and submission of the clinical curriculum
In addition to the learning experience in the clinical site, the clinical curriculum consists of the reading assignments and learning objectives that are included in this syllabus and clinical case modules that are derived from some, but not all, of the learning objectives. Student's success as a physician will depend upon the learning skills they develop during this core rotation, as guided by this syllabus and clinical case modules. National boards, residency in-training examinations, and specialty board examinations require ever increasing sophistication in student's ability to apply and manipulate medical knowledge to the clinical context.

The clinical case modules were developed by VCOM Discipline Chairs and are intended to provide an OMS 3 student with a clinical, patient-centered approach to the learning content of this rotation. The modules should not be approached as rote learning, but should provide structured, clinically-focused learning from the evidence base for this rotation. To submit the clinical case modules follow the link for your campus below:

- Auburn Campus:
https://virginiatech.qualtrics.com/jfe/form/SV_ezfwilLk1fobdP
- Carolinas Campus:
https://virginiatech.qualtrics.com/jfe/form/SV_djnoZ3ZmKEijLoh
- Virginia Campus:
https://virginiatech.qualtrics.com/jfe/form/SV_6Qe3kSWlslme4F7

The content of the end-of-rotation exams will be based upon the learning objectives and reading assignments in this syllabus and the clinical case modules and their associated references.

- Logging Patient Encounters and Procedures in CREDO:
 - Students are required to log all patient encounters and procedures into the CREDO application. All students must review these logs with their preceptors prior to the end of the rotation period, as required by the final preceptor evaluation form. Students are encouraged to periodically review their CREDO entries with their preceptor during the rotation period. These reviews should stimulate discussions about cases and learning objectives, as well as identify curriculum areas the student may still need to complete. CREDO can be accessed at: <https://credo.education/>
- Rotation Evaluations:
 - Student Site Evaluation: Students must complete and submit at the end of rotation. See the VCOM website at: <http://intranet.vcom.edu/clinical/Login/index.cfm?fuseaction=LoginInfo&LoginPage=ViewStudentSchedule> to access the evaluation form.
 - Third-Year Preceptor Evaluation: It is the student's responsibility to ensure that all clinical evaluation forms are completed and submitted online or turned in to the Site Coordinator or the Clinical Affairs Office at the completion of each rotation. Students should inform the Clinical Affairs Office of any difficulty in obtaining an evaluation by the preceptor at the end of that rotation. See the VCOM website at: www.vcom.edu/academics/clinical-forms to access the evaluation form.
 - Mid-Rotation Evaluation: The mid-rotation evaluation form is not required but highly recommended. See the VCOM website at: www.vcom.edu/academics/clinical-forms to access the mid-rotation evaluation form.
- Successful completion of the end-of-rotation written exam. The end-of-rotation exam questions will be derived directly from the specific objectives presented in each of the below modules.

B. Grading

Students must pass both the "module" and "rotation" portions of the course. All rotations have a clinical rotation grade and clinical modules/exam grade. Failure to submit all of the geriatric case module files using the Qualtrics link provided above **by no later than 5 PM on the last day of the rotation** will result in a **deduction of 5 points from your end-of-rotation exam score**.

Clinical Grading Scale and GPAs						
OMS 3 End-of-Rotation Exam Grades			OMS 3 AND OMS 4 Clinical Rotation Grades		Other Grades	
A	90-100	4.0	H	Honors	IP	In Progress
B+	85-89	3.5	HP	High Pass	INC	Incomplete
B	80-84	3.0	P	Pass	CP	Conditional Pass
C+	75-79	2.5	F	Fail	R	Repeat
C	70-74	2.0			Au	Audit
F	<70	0.0				

C. Remediation

Students who fail one or more rotations or one or more end-of-rotation exams twice will be referred to the Promotion Board. If a student fails the professionalism and ethics portion of the evaluation he or she may be removed from the rotation and referred to the Professionalism and Ethics Standards Board. No grade will be changed unless the Office of Clinical Affairs certifies to the Registrar, in writing, that an error occurred or that the remediation results in a grade change.

- **Failure of an End-of-Rotation Exam**

Students must pass each end of rotation exam with a C (70%) or better to receive a passing grade for the clinical medical knowledge module. Students who fail an end of rotation exam but pass the clinical rotation evaluation component have a second opportunity to pass the exam within 28 days of notification. If the student passes the remediation exam, the remediated exam grade will be the grade recorded on the transcript and be GPA accountable. If the student fails the end of rotation exam a second time, the student will receive an “F” grade for the rotation and will be brought before the Promotion Board. If the student is allowed to repeat the rotation, all components of the rotation must be repeated. In this case, the “F” grade remains the permanent grade for the initial rotation and the student will receive a new grade for the repeated rotation. The grade will be recorded in a manner that designates that it is a repeated rotation (eg. R-pass).

- **Failure of a Rotation**

If a student fails the clinical rotation evaluation the student will receive an “F” grade for the rotation and will be brought before the Promotion Board. If the student is allowed to repeat the rotation, all components of the rotation must be repeated. In this case, the “F” grade remains the permanent grade for the initial rotation and the student will receive a new grade for the repeated rotation. The grade will be recorded in a manner that designates that it is a repeated rotation (eg. R-pass).

- **Failure to Make Academic Progress**

Repeated poor or failing performance in a specific competency area on the evaluation form across more than one rotation may also be a reason for a required remediation at the discretion of the Associate Dean for Clinical Affairs in consultation with the clinical chair, the preceptor, and the Promotion Board. In general, rotations should show a progression of improvement in clinical performance. Those students who receive a mere “Pass” on multiple rotations and/or maintain a “CP” on one or more rotations after final grades are received, will be counseled about overall performance and may be required to complete an additional rotation at the end of the year. Any additional curriculum or required remediation will be based on the performance measure. In general, rotations should show a progression of improvement in performance. Those students who continually score in the "unsatisfactory" category or repeated "performs some of the time, but needs improvement" consistently and do not improve over time or who fail one or more

rotations may be deemed as not making academic progress and, as a result, may be referred to the Promotion Board and be required to complete additional curriculum. Multiple rotation failures may result in dismissal.

Poor ratings on the clinical rotation evaluation in the professional and ethical areas of the assessment are addressed by the Associate Dean for Clinical Affairs. The Associate Dean may design a remediation appropriate to correct the behavior or if needed may refer the student to the Professionalism and Ethics Board. In the case of repeated concerns in a professional and/or ethical area, the Associate Dean for Clinical Affairs may refer the student to the Campus Dean for a Behavioral Board or Promotion Board hearing. The Campus Dean will act upon this referral depending on the severity and the area of the performance measure. Poor ratings in this area will include comments as to the exact nature of the rating. Repeated poor a failing performance in a specific competency area on the evaluation form across more than one rotation may also be a reason for a required remediation at the discretion of the Associate Dean for Clinical Affairs in consultation with the clinical chair and the preceptor, and the Promotion Board. In general, rotations should show a progression of improvement in clinical performance.

VII. Academic Expectations

Grading policies, academic progress, and graduation requirements may be found in the [College Catalog and Student Handbook](#).

A. Attendance

Attendance for all clinical rotation days is mandatory. The clinical site will determine the assigned days and hours to be worked within the rotation period. Students are required to attend any orientation the clinical site sets as mandatory prior to any rotation or the clinical year. The orientation sessions vary by site and are required to maintain assignment to the site. Although the clinical site determines the assigned days and hours to be worked, VCOM has established the following guidelines:

- 4 week rotations may not be less than 20, eight hour days for a total of a minimum of 160 hours and often average 180 hours or greater.
 - Students may be required to work up to 24 days in a 4-week period or 25 days in a 1-month rotation, including call and weekends at the discretion of the clinical site.
 - If the clinical site requires longer daily hours or shift work, the student may complete the required hours in less than 20 days with the following specifications:
 - Students should not work greater than an average of 12 out of every 14 days
 - Student should not work more than 12 hours daily, exclusive of on-call assignments.
 - If on-call hours are required, the student should not be on duty for greater than 30 continuous hours.
 - Students may be required to work weekends but in general should have 2 weekends per month free and an average of 2 of 7 days per week free.

It should be noted that preceptors will have final determination of the distribution of hours, which may vary from this policy but should not in general be less than 160 hours for a 4 week rotation. The institution's DSME and assigned clinical faculty determine clinical duty hours. Students are responsible to the assigned clinical faculty and are expected to comply with the general rules and regulations established by the assigned clinical faculty, and/or the core hospital(s), or facility associated with the rotation.

The average student clinical day begins at 7 am and ends at 7 pm. Students are expected to work if their assigned clinical faculty is working. Some rotations assign students to shifts and in such cases the student may be required to work evening or night hours. If on-call hours are required, the student must

take the call; however, the student should not be on duty for greater than 30 continuous hours. Students may be required to work weekends, but in general should have two weekends per month free and two of seven days per week free. Student holidays are determined by the clinical site and follow those of other students and/or residents from the clinical site. Students must be prompt and on time for the clinical rotation.

Students are expected to arrive on time to all clinical rotations. If a student is late, he or she must notify the site coordinator and the preceptor prior to or at the time they are scheduled arrive. Students must have a reason for being late such as illness or vehicle issues and it is not anticipated that this would occur more than one occasion AND it is important the student call in prior to being late. Repeated tardiness is considered as unprofessional behavior and is a reason for dismissal from a rotation. Students with repeated tardiness will be referred to the PESB. Tardiness is defined as more than 5 minutes after the scheduled time the preceptor designates as the expected arrival time.

The Office of Clinical Affairs requires that the medical student complete and submit an Excused Absence Clinical Rotations Approval form for any time "away" from clinical rotations. Forms are available at: www.vcom.edu/academics/clinical-forms. The student must have this form signed by their preceptor and others designated on the form to obtain an excused absence and must be provided to the DSME and the Office of Clinical Affairs through the site coordinator. The form must be completed prior to the beginning of the leave. If an emergency does not allow the student to submit this prior to the absence, the "Excused Absence Clinical Rotations Approval" form must be submitted as soon as the student is physically able to complete the form. In addition to completion of the form, students must contact the Department of Clinical Affairs, the Site Coordinator, and the preceptor's office by 8:30 AM of the day they will be absent due to an illness or emergency. No excused absence will be granted after the fact, except in emergencies as verified by the Associate Dean for Clinical Affairs.

Regardless of an excused absence, students must still complete a minimum of 160 hours for a 4 week rotation in order to pass the rotation. Any time missed must be remediated during the course of the rotation for credit to be issued. Students may remediate up to four missed days or 48 hours missed during any rotation period by working on normal days off. OMS 3 students who have any unexcused absences will be referred to the PESB.

VIII. Professionalism and Ethics

It is advised that students review and adhere to all behavioral policies including attendance, plagiarism, dress code, and other aspects of professionalism. Behavioral policies may be found in the [College Catalog and Student Handbook](#).

A. VCOM Honor Code

The VCOM Honor Code is based on the fundamental belief that every student is worthy of trust and that trusting a student is an integral component in making them worthy of trust. Consistent with honor code policy, by beginning this exam, I certify that I have neither given nor received any unauthorized assistance on this assignment, where "unauthorized assistance" is as defined by the Honor Code Committee. By beginning and submitting this exam, I am confirming adherence to the VCOM Honor Code. A full description of the VCOM Honor Code can be found in the [College Catalog and Student Handbook](#).

IX. Clinical Curriculum

In addition to the topics below with reading references and learning objectives, students must also complete the assigned clinical cases. The content of the end-of-rotation exams will be based upon the learning objectives and reading assignments in this syllabus and the clinical case modules and their associated references. To submit the clinical case modules follow the link for your campus below:

- Auburn Campus: https://virginiatech.qualtrics.com/jfe/form/SV_ezfwilLk1fobdP
- Carolinas Campus: https://virginiatech.qualtrics.com/jfe/form/SV_djnoZ3ZmKEijLoh
- Virginia Campus: https://virginiatech.qualtrics.com/jfe/form/SV_6Qe3kSWlslme4F7

1. Acute Delirium

Reading Assignment: Hazzard's: Geriatric Medicine and Gerontology, Chapter 47

Online PowerPoint Presentation: [Acute Delirium](#)

Learning Objectives:

- Define Delirium.
- Identify details of these clinical presentations of delirium
 - Delirium 2° to medication
 - Delirium 2° to lorazepam withdrawal
 - Delirium 2° the stress of a new place
 - Delirium 2° to an infection
 - Delirium 2° to surgery/hip fracture
- List details of the epidemiology of delirium.
- Define the adverse consequences of delirium.
- Discuss the timeline of delirium.
- List delirium synonyms.
- Identify diagnostic criteria of delirium
 - General clinical features
 - DSM-5 criteria
- List and define elements of the CAM scale
- Select aspects of these delirium clinical types
 - Hypervigilant
 - Hypersomnolent
 - Mixed
- Identify aspects of the concept of "Brain Failure".
- List aspects of the pathophysiology of delirium
 - Metabolic threshold
 - Cholinergic model
- Select details of these causes of delirium
 - Metabolic or Endocrine
 - Infections
 - Drug Toxicity
 - Central Nervous system insults
- List treatments of delirium including details of:
 - Nonpharmacologic management: Restraints & Environment
 - Pharmacologic management
 - Benzodiazepine use: Clinical consequences
 - Antipsychotic use: Haldol dosage and side effects

2. Aging Changes, Functional Ability, and Safety

Reading Assignment: Hazzard's: Geriatric Medicine and Gerontology, Chapters 10 and 48

Online PowerPoint Presentation: [Aging Changes, Functional Ability, and Safety](#)

Learning Objectives:

- a. Explain impact of age-related changes on drug selection and dose based on knowledge of age-related changes in
 - i. Renal
 - ii. hepatic function
 - iii. GI Function
 - iv. body composition
 - v. central nervous system sensitivity
- b. Discuss Functional ability in the elderly
 - i. Activities of daily living
 - a) Basic ADL
 - b) instrumental ADLs (IADLs)
 - ii. Exercise and function implications
- c. Discuss aging changes associated with safety
- d. Incorporate adaptive interventions and involvement of interdisciplinary team in care of the elderly
- e. Delineate specific nutritional concerns of the elderly
- f. Discuss the causes of falls and risk factors for falls.
- g. Discuss therapy to help prevent falls.
- h. Understand a proper wellness exam for elderly people.
- i. Delineate the immunizations normally offered to elderly people.
- j. What is the proper timing of the pneumonia vaccines.

3. Constipation

Reading Assignment: Hazzard's Geriatric Medicine and Gerontology, Chapter 95

Online PowerPoint Presentation: [Constipation](#)

Learning Objectives:

- a. Define the burden of constipation in the elderly.
- b. Review the criteria for dehydration.
- c. Discuss risk factors for constipation in the elderly.
- d. Discuss the treatment of constipation.
- e. List the impacts of constipation.
- f. Define constipation.
- g. State normal stool frequency.
- h. State the cause of diarrhea in constipation.
- i. List the relationships of diet, activity, and pregnancy to constipation.
- j. List the steps in the vicious cycle of laxative abuse.
- k. List systemic medical conditions causing constipation.
- l. List colon lesions causing constipation.
- m. List GI medical conditions causing constipation.
- n. List anal conditions causing constipation.
- o. List medications causing constipation.
- p. List red flags indicating something more serious is going on as well.
- q. List common risk factors for constipation.
- r. State the steps in the proper workup for constipation.
- s. List the various treatments for constipation.
- t. Define and characterize impaction.

4. Dehydration and Nutrition

Reading Assignment: Hazzard's Geriatric Medicine and Gerontology, Chapter 89

Online PowerPoint Presentation: [Dehydration](#)

Learning Objectives:

- a. Discuss malnutrition in the elderly
 - i. Risk Factors
 - ii. Utilize screening methods of defining malnutrition in the elderly
 - iii. Discuss Medication associated nutrient depletion
- b. Dehydration in the elderly
 - i. Define the laboratory evaluation
 - ii. Incorporate Historical data helpful in the diagnosis of dehydration
 - iii. Review the physical exam associated with dehydration
 - iv. Delineate the risk factors for dehydration
 - v. Review the Prevention and treatment of dehydration in the elderly
- c. Define dehydration.
- d. List various etiologies of dehydration.
- e. List the clinical manifestations of dehydration.
- f. State the findings on physical exam in dehydration.
- g. Tell the various laboratory findings in dehydration.
- h. Calculate the estimated glomerular filtration rate.
- i. Calculate the creatinine clearance.
- j. Calculate the free water clearance.
- k. Calculate the fractional excretion of Na.
- l. List the special findings that apply in the elderly with dehydration.

5. Dementia

Reading Assignment: Hazzard's Geriatric Medicine and Gerontology, Chapter 45

Online PowerPoint Presentation: [Dementia](#)

Learning Objectives:

- a. List normal age related cognitive changes.
- b. Define dementia.
- c. Tell the differential diagnosis of dementia.
- d. List the common types of dementia.
- e. Repeat the various aspects of Alzheimer's Disease.
 - i. Delineate the DSM-V Criteria for Alzheimer's Disease
 - ii. Describe the pathophysiology for Alzheimer's Disease
 - iii. Define the typical CT Findings in Alzheimer's Disease
- f. Repeat the various aspects of Vascular Dementia.
- g. Repeat the various aspects of Lewy Body Dementia.
 - i. List the DSM-V Criteria for Lewy Body Dementia
 - ii. Discuss the treatment of hallucinations in Lewy Body Dementia
 - iii. Define the treatment options for memory loss in Lewy Body Dementia
 - iv. Discuss the pathophysiological findings in Lewy Body Dementia
- h. Delineate the most common causes of reversible dementia
- i. List the classic symptoms in Normal Pressure Hydrocephalus
 - i. Discuss the CT findings in Normal Pressure Hydrocephalus
 - ii. Delineate the treatment options for Normal Pressure Hydrocephalus
 - iii. Define the prognosis in Normal Pressure Hydrocephalus
- j. Discuss areas of the brain affected in Pick's Disease
 - i. List the typical symptoms in Pick's Disease
- k. List the steps in how to evaluate dementia.
- l. State the factors in the prognosis in dementia.

- m. List steps in the non-medical management of dementia.
- n. List steps in the medical management of dementia.
 - i. List medications used to treat aggressive behaviors
- o. Tell aspects of the importance of caregiver support in dementia.
- p. Define and distinguish among the clinical presentations of delirium, dementia, and depression.
- q. Formulate a differential diagnosis and implement initial evaluation in a patient who exhibits dementia, delirium, or depression.
- r. Perform and interpret a cognitive assessment in older patients for whom there are concerns regarding memory or function.
 - i. Delineate the Clock Drawing Test usage

6. Dizziness and Vertigo

Reading Assignments:

- Hazzard's Geriatric Medicine and Gerontology, Chapter 50
- <https://emedicine.medscape.com/article/2149881-overview>
- <https://www.aafp.org/afp/2017/0201/p154.html>

Learning Objectives:

- a. Understand the epidemiology and pathophysiologic mechanisms that contribute to chronic dizziness in older persons.
- b. Describe different presentation types of dizziness.
- c. Describe key elements of history and physical examination needed to create a differential diagnosis.
- d. Identify and describe the evaluation and management of common causes of dizziness.
- e. Discuss the role of vestibular rehabilitation in the management of chronic dizziness.

7. Elder Abuse

Reading Assignment: Hazzard's Geriatric Medicine and Gerontology, Chapter 54

Online PowerPoint Presentation: [Elder Abuse](#)

Learning Objectives:

- a. Define elder abuse and neglect.
 - i. Define common signs of elderly self-neglect
 - ii. Define common signs of elder abuse
- b. List aspects of the epidemiology of elder abuse.
- c. List the roles of Adult Protective Services in elder abuse.
- d. Tell the characteristics of typical elder abuse victims.
- e. List and define types of elder abuse.
 - i. Delineate the signs of physical elder abuse
 - ii. Enumerate the signs of psychological abuse
 - iii. Discuss the signs of financial exploitation of the elderly
- f. List potential elder abuse perpetrators.
- g. Tell steps in the history recommended for elder abuse evaluations.
- h. Tell items in the documentation needed in elder abuse evaluations.
- i. List and define causative theories of elder abuse.
- j. List laboratory and imaging studies useful in elder abuse evaluations.
- k. Define the role of mandated reporters of elder abuse.
 - i. Identify the agencies involved in the investigation of reports of elder neglect
 - ii. Define reporting requirements of a physician performing a house call on the patient
- l. List who is a mandated reporter.
- m. Tell when, what, and how do you report elder abuse.
- n. Define the legal ramifications of being a mandated reporter of elder abuse.

8. Infections

Reading Assignment: Hazzard's Geriatric Medicine and Gerontology, Chapter 125

Online PowerPoint Presentation: [Infections](#)

Learning Objectives:

- a. List common nursing home infections.
- b. List predisposing conditions for infection.
- c. State the clinical manifestations of infection in the elderly.
- d. Define the meaning and significance of rubor, calor, dolor, and tumor.
- e. List steps in the evaluation of infection.
- f. Tell about the use of a CBC in infections.
- g. Tell details about the use and evaluation of a UA, C&S.
- h. Tell about the use of a BMP in infection.
- i. Discuss sepsis and blood cultures.
- j. Define pneumonia and steps in its evaluation.
- k. List findings and treatments of Influenza A.
- l. List findings and treatments of skin and soft tissue infections.
- m. List findings and treatments of scabies.
- n. Tell about findings in gastroenteritis and the role of stool testing in diagnosis.
- o. List the usual immunizations most of the elderly should have and their importance.
- p. Explain the risks, indications, alternatives, and contraindications for indwelling (i.e., Foley) catheter use in the older adult patient.

9. Medications and Polypharmacy

Reading Assignment: Hazzard's Geriatric Medicine and Gerontology, Chapters 125 and 127

Online PowerPoint Presentation: [Medications and Polypharmacy](#)

Learning Objectives:

- a. Define polypharmacy and its associated problems.
- b. List ways that polypharmacy threatens healthcare.
- c. Tell how an understanding of drug interactions can help manage polypharmacy.
- d. List the hazards of ginkgo biloba.
- e. List the hazards of St. John's Wort.
- f. List the hazards of ginseng.
- g. List the hazards of kava.
- h. Define drug-drug pharmacokinetic interactions.
- i. List the main Cytochrome P450 enzymes and their influence on drug function in the body.
- j. Define drug-drug pharmacodynamic interactions.
- k. List aspects about what disease-drug interaction are.
- l. List polypharmacy issues with warfarin.
- m. List polypharmacy issues with fluoroquinolones.
- n. List polypharmacy issues with seizure medications.
- o. List polypharmacy issues with lithium.
- p. List polypharmacy issues with sildenafil.
- q. List polypharmacy issues with cholesterol medications.
- r. List polypharmacy issues with SSRI's.
- s. List polypharmacy issues with selegiline.
- t. List polypharmacy issues with fluoxetine.
- u. List polypharmacy issues with tramadol.
- v. List polypharmacy issues with triptans..
- w. Explain impact of age-related changes on drug selection and dose based on knowledge of age-related changes in renal and hepatic function, body composition, and central nervous system sensitivity.

- x. Identify medications, including anticholinergic, psychoactive, anticoagulant, analgesic, hypoglycemic, and cardiovascular drugs that should be avoided or used with caution in older adults and explain the problems associated with each.
- y. Document a patient's complete medication list—including prescribed, herbal, and over-the-counter medications—and for each medication provide the dose, frequency, indication, benefit, side effects, and an assessment of adherence.

10. Musculoskeletal Geriatrics

Reading Assignment:

- Hazzard's Geriatric Medicine and Gerontology, Chapter 113
- Hazzard's Geriatric Medicine and Gerontology, Chapter 117

Online PowerPoint Presentation: [Musculoskeletal Geriatrics](#)

- a. List common musculoskeletal problems in the elderly.
- b. List steps in the proper shoulder exam.
- c. List the various sources and causes of knee pain in the elderly.
- d. Tell about the various sources and causes of hip pain in the elderly.
- e. List the Activities of Daily Living.
- f. List steps in the Tinetti Balance Assessment Tool.
- g. List steps in the "Get up and go" test.
- h. Define the epidemiology of Osteoarthritis
- i. Discuss risk factors associated with Osteoarthritis
- j. Incorporate diagnostic criteria for the diagnosis of DJD and the subclasses
- k. List anatomical findings of knee and spinal Osteoarthritis
- l. Discuss treatment of Osteoarthritis
- m. Define clinical details of osteoarthritis.
- n. List findings in osteoarthritis of the hands.
- o. List findings in osteoarthritis of the spine.
- p. List findings in osteoarthritis of the knee.
- q. Tell aspects of special attention in OMM in the elderly

11. Osteoporosis

Reading Assignment:

- Hazzard's Geriatric Medicine and Gerontology, Chapter 118
- <https://www.uspreventiveservicestaskforce.org/Page/Name/uspstf-a-and-b-recommendations/>
- <https://emedicine.medscape.com/article/330598-overview>

Online PowerPoint Presentation: [Osteoporosis](#)

Learning Objectives:

- a. Define osteoporosis and osteopenia.
- b. Tell details about the prevalence of osteoporosis.
- c. List the changes in bones during one's lifetime.
- d. List risk factors for osteoporosis.
- e. Tell the clinical manifestations of osteoporosis.
- f. State the most important part of treatment.
- g. List steps in the evaluation of osteoporosis.
- h. Define bone mineral density testing and its use.
- i. List secondary causes of osteoporosis and screening for them.
- j. List aspects of the prevention and treatment of osteoporosis.
- k. Tell about the importance of distinguishing disease oriented evidence from patient oriented evidence.
- l. Tell about the meaning and calculation of the NNT for a drug or treatment.
- m. List the roles of calcium and vitamin D in treating osteoporosis.

- n. List the roles of estrogen replacement in treating osteoporosis.
- o. Define the use of bisphosphonates in treating osteoporosis.
- p. Tell about the role of calcitonin in treating osteoporosis.
- q. Define the role of denosumab in treating osteoporosis.
- r. Define the role of teriparatide in treating osteoporosis.
- s. Tell about the effects of fluoride in treating osteoporosis.
- t. Tell about the effectiveness of hip pads in treating osteoporosis.
- u. Discuss the USPTFS recommendations for osteoporosis
- v. Understand the features of osteoporosis in older persons.
- w. Identify fracture risk in older persons using FRAX.
- x. Delineate the criteria for the diagnosis of osteoporosis
- y. Define fracture prevention strategies in older persons.
- z. List the major sequelae of osteoporosis
- aa. Discuss treatment options available for osteoporosis
 - i. Exercise (axial loading)
 - ii. Nutrients
 - iii. Medications

12. Pain

Reading Assignment: Hazzard's Geriatric Medicine and Gerontology, Chapter 56

Online PowerPoint Presentation: [Pain](#)

Learning Objectives:

- a. List the definition of pain, characteristics of Total Pain, allodynia, hyperalgesia, consequences of pain, and the 5th vital sign.
- b. List the generation, neuroreceptors, neural circuits, perception, and types of physical pain and apply this understanding clinically.
- c. List the assessment of patients for pain by exams and scales.
- d. Tell how to overcome barriers to pain control in patients, medical staff, and yourself.
- e. List and use non-pharmacologic strategies to treat pain.
- f. Tell how to use analgesics safely and effectively, applying proper principles and the WHO Analgesic Ladder.
- g. List and tell how to apply clinically a full understanding of the pharmacology, dosing, use, metabolism, risks, and side effects of the WHO Step 1 analgesics: APAP, NSAIDS, tramadol.
- h. List and tell how to apply clinically a full understanding of the pharmacology, dosing, use, metabolism, risks, and side effects of the WHO Step 2 analgesics: APAP combined with hydrocodone, codeine, and oxycodone.
- i. List and tell how to apply clinically a full understanding of the pharmacology, dosing, use, metabolism, risks, and side effects of the WHO Step 3 analgesics: morphine, oxycodone, fentanyl, hydromorphone, and methadone.
- j. Convert opioids safely and effectively from one drug or dosage route to another, and tell when and why this would be needed.
- k. Tell how to apply clinically a full understanding of the pharmacology, dosing, use, metabolism, risks, and side effects of the adjuvant medications to enhance the treatment of pain.
- l. Tell how to manage difficult specific types of pain including neuropathy, bone pain, and bowel obstruction pain.
- m. Tell how to avoid and effectively manage side effects of opioids including allergy, urticaria, constipation, nausea, vomiting, sedation, delirium, and respiratory depression.
- n. Define and tell how to effectively manage opioid addiction, tolerance, dependence, and abuse.
- o. List the steps in proper documentation at every opioid prescription and pain encounter properly carried out in practice.
- p. Define the principle in your practice that "Pain is inevitable. Suffering is optional."

13. Palliative Care

Reading Assignment:

- Unipac, Vol. 1: The Hospice/Palliative Medicine Approach to End-of Life Care
- Hazzard's Geriatric Medicine and Gerontology, Chapter 3

Online PowerPoint Presentation: [Palliative Care](#)

Learning Objectives:

- Define palliative care
- Define hospice
- Compare and contrast the dichotomous mode of healthcare delivery versus the integrated model of healthcare delivery
- Identify indications for palliative care
- Recognize common symptoms experience at the end of life including pain, dyspnea, hallucinations, anorexia, fatigue, nausea, constipation, xerostomia, dysphagia, etc. and treatment strategies for these
- Identify how to create Goals of Care for a patient
- Identify indications for artificial nutrition or hydration
- Identify the actively dying patient
- Define and differentiate among types of code status, health care proxies, and advanced directives in the state where one is training.
- Explain what a Living Will is.
- Accurately identify clinical situations where life expectancy, functional status, patient preference, or goals of care should override standard recommendations for screening tests and/or treatment in older adults.
- Identify the psychological, social, and spiritual needs of patients with advanced illness and their family members, and link these identified needs with the appropriate interdisciplinary team members.
- Discuss palliative care (including hospice) as a positive, active treatment option for a patient with advanced disease.
- Discuss medications in neuropathic pain
- Discuss medications for dyspnea in hospice patients
- Define the difference between addiction and dependence
- Discuss the common functional rating scales to be used in patient's requiring hospice care
- Define PPS and how is it scaled
- Discuss Medical Power of Attorney
- List the Kubler Ross Five Stages of Grieving
- Delineate the hospice criteria for: lung cancer; dementia, stroke and CHF?
- List the members of the hospice interdisciplinary team?

14. Sensory Losses: Hearing and Vision

Reading Assignment:

- Hazzard's Geriatric Medicine and Gerontology, Chapters 15 and 20
- <https://www.medsafe.govt.nz/profs/PUArticles/June2016/MedicineInducedHearingLoss.htm>
- <https://www.uspharmacist.com/article/hearing-impairment-age-and-drugrelated-causes>
- <https://emedicine.medscape.com/article/856116-workup>

Learning Objectives:

- Discuss the USPTFS recommendations for hearing and vision loss
- Define screening available for hearing and vision loss in the elderly
- Discuss risk factors for hearing and vision loss in the elderly
- Discuss presbycusis.
- Delineate the major causes of vision in the elderly
- Discuss treatment for vision and hearing loss in the elderly including nutrients

- g. Discuss the risk factors associated with ARHI
 - i. Genetics
 - ii. Lifestyle
 - iii. Medical diagnosis.
 - iv. Medications associated hearing loss both temporary and permanent loss
- h. Define conductive and neurosensory hearing loss
 - i. Causes of each type
 - ii. Be able to distinguish audiograms associated with each loss.
- i. Define presbycusis
 - i. Cause
 - ii. Hearing frequency associated with
 - iii. Treatment
- j. Implement the basic workup for hearing loss
- k. Discuss the modalities available for treatment of ARHI
- l. review the epidemiology/demographics of vision loss in the elderly
 - i. Frequency and association with age
 - ii. Related cost
 - iii. Related impairments

15. Stroke and TIA's

Reading Assignment: Hazzard's Geriatric Medicine and Gerontology, Chapter 65

Online PowerPoint Presentation: [Stroke](#)

Learning Objectives:

- a. Define stroke.
- b. Define TIA.
- c. List and describe the kinds of stroke.
- d. List the risk factors of stroke.
- e. Tell about the symptoms of stroke.
- f. List and describe the territorial stroke syndromes.
- g. List steps in the history taking in a stroke victim.
- h. List steps in the physical in a stroke victim.
- i. Assess and describe baseline and current functional abilities (instrumental activities of daily living, activities of daily living, and special senses) in an older patient by collecting historical data from multiple sources and performing a confirmatory physical examination.
- j. List the differential diagnosis of stroke.
- k. List laboratory testing useful in stroke.
- l. Tell about aspects of imaging studies useful in stroke.
- m. List steps in treatment of stroke.
- n. Develop a preliminary management plan for patients presenting with functional deficits, including adaptive interventions and involvement of interdisciplinary team members from appropriate disciplines, such as social work, nursing, rehabilitation, nutrition, and pharmacy.
- o. State steps in the prevention of stroke.

16. Syncope

Reading Assignment:

- Hazzard's Geriatric Medicine and Gerontology, Chapter 51
- <https://www.medscape.com/viewarticle/548657>
- https://www.eusem.org/images/ESC_guideline_2018.pdf
- <https://www.ahajournals.org/doi/full/10.1161/CIR.0000000000000499>

Learning Objectives:

- a. Understand the presentation of syncope and that syncope can mimic falls.
- b. Describe the common subtypes and differential diagnosis of syncope.

- c. Discuss risk stratification and how risk stratification drives management.
- d. Detail pathophysiology of common syncope subtypes in older patients and their management.
- e. Discuss the challenges for recognition and management of syncope in the oldest old such as frailty, unwitnessed events, medications, and cognitive impairment.

17. Tremor and Parkinsonism

Reading Assignment:

- Hazzard's Geriatric Medicine and Gerontology, Chapter 67
- <https://emedicine.medscape.com/article/1150290-overview>
- [Pal, P. K. \(2011\). Guidelines for management of essential tremor. *Annals of Indian Academy of Neurology*. 14\(Suppl 1\), S25–S28. doi:10.4103/0972-2327.83097](#)

Online PowerPoint Presentation: [Parkinson's](#)

Learning Objectives:

- a. Define the epidemiology of benign essential tremor
- b. Review the prognosis of benign essential tremor
- c. Define essentials needed for the diagnosis of benign essential tremor, both inclusive and exclusive criteria
- d. Discuss the treatment of benign essential tremor
- e. Discuss the epidemiology of Parkinson's
- f. Discuss the pathophysiology of Parkinson's
- g. Define prognosis of Parkinson's
- h. Review the treatment of Parkinson's
- i. List the aspects of Parkinson's Disease and its etiology.
- j. List the clinical manifestations of Parkinson's Disease.
- k. Understand the diagnosis of Parkinson's Disease, both Typical and Atypical variants
- l. List the medications used to treat Parkinson's Disease.
- m. Tell aspects of the pharmacology and use of Levodopa/Carbidopa.
- n. Tell aspects of the pharmacology and use of dopamine agonists.
- o. Tell aspects of the pharmacology and use of selegiline.
- p. Tell aspects of the pharmacology and use of COMT inhibitors.
- q. Tell aspects of the use of OMT in Parkinson's Disease.
- r. Define drug induced Parkinsonism.
- s. Discuss the significance of Lewy bodies.
- t. List symptoms of Shy Drager Syndrome and distinguish it from Parkinson's Disease.
- u. List other conditions with Parkinsonian features.

18. Polymyalgia Rheumatica

Reading Assignment: Hazzard's Geriatric Medicine and Gerontology, Chapter 120

Online PowerPoint Presentation: [Polymyalgia Rheumatica](#)

Learning Objectives:

- a. Define polymyalgia rheumatica and its epidemiology.
- b. Tell aspects of the etiology of polymyalgia rheumatica.
- c. List the symptoms of polymyalgia rheumatica.
- d. List steps in the diagnosis of polymyalgia rheumatica.
 - i. Laboratory
 - ii. Clinical
- e. Define what a sed rate is.
- f. Tell aspects of temporal arteritis, its symptoms, and complications.
- g. List aspects of the management of polymyalgia rheumatica.
- h. Tell aspects of the pathology underlying temporal arteritis.

19. Pressure Ulcers and Common Skin Diseases

Reading Assignment: Hazzard's Geriatric Medicine and Gerontology, Chapter 52

Online PowerPoint Presentation: [Pressure Ulcers](#)

Learning Objectives:

- a. Define pressure ulcers.
- b. List typical locations of pressure ulcers.
- c. Define what stages of pressure ulcers are.
- d. List steps in typical pressure ulcer healing.
- e. List aspects of the pathogenesis of pressure ulcers.
- f. Define who is at most risk for pressure ulcers.
- g. List ways to prevent most pressure ulcers.
- h. List the dressings used in treatment of pressure ulcers.
- i. List steps in the debridement of pressure ulcers.
- j. State the roles of pain control in treatment of pressure ulcers.
- k. List steps in the diagnosis and treatment of Stage I pressure ulcers.
- l. List steps in the diagnosis and treatment of Stage II pressure ulcers.
- m. List steps in the diagnosis and treatment of Stage III & IV pressure ulcers.
- n. Tell the roles of surgery in treatment of pressure ulcers.
- o. Explain what seborrhea is and how it is treated.
- p. Explain what candida dermatitis is and how it is treated.
- q. Explain what intertrigo is and how it is treated.
- r. Explain what psoriasis is and how it is treated.
- s. List common causes of dry skin in the elderly
 - i. Define the treatments for dry skin in the elderly
 - ii. List the potential complication of cracks in the skin from dryness
 - iii. List the medications are used to treat pruritus
 - iv. Define the common side effects of their use in the elderly
 - v. Review the endocrine issues can cause dry skin
- t. Actinic and seborrheic keratosis
 - i. List the causes of actinic and seborrheic keratosis
 - ii. Define the prognosis of actinic and seborrheic keratosis
 - iii. Discuss the treatment of actinic and seborrheic keratosis
- u. Define the Kennedy Ulcer

20. The H&PE And Transition of Care

Recommended Reading Assignment:

- Hazzard's Geriatric Medicine and Gerontology, Chapter 15
- Essentials of Clinical Geriatrics, Chapters 53 and 56

Online PowerPoint Presentation: [The H&PE & Transitions of Care](#)

Learning Objectives:

- i. Explain the components of a full H&PE and how each contributes to good patient care.
- ii. List all elements of a Review of Systems and provide 3 items to cover in each element.
- iii. Conduct a surveillance examination of areas of the skin at high risk for pressure ulcers and describe existing ulcers.
- iv. Perform and interpret a cognitive assessment in older patients for whom there are concerns regarding memory or function.
- v. Perform a full H&PE.
- vi. Identify the hazards transitions of care pose to patients.
- vii. Communicate the key components of a safe discharge plan (eg, accurate medication list, plan for follow-up), including comparing/contrasting potential sites for discharge.
- viii. Identify potential hazards of hospitalization for the elderly (including immobility, delirium, medication side effects, malnutrition, pressure ulcers, procedures, perioperative and

postoperative periods, and hospital-acquired infections) and identify potential prevention strategies.

21. Urinary Incontinence

Reading Assignment: Essentials of Clinical Geriatrics, Chapter 8

Online PowerPoint Presentation: [Urinary Incontinence](#)

Learning Objectives:

- i. Define urinary incontinence and how to uncover it.
- ii. Repeat the steps in the neurology of urinary function.
- iii. List the types of urinary incontinence.
- iv. List causes of transient urinary incontinence.
- v. Define urge incontinence.
- vi. Define stress incontinence.
- vii. Define overflow incontinence.
- viii. Define functional incontinence.
- ix. Define mixed urinary incontinence.
- x. List the elements of the H&PE related to urinary incontinence evaluation.
- xi. Tell about aspects of the use of a bladder diary.
- xii. List aspects of the use of post voiding residual urine volume and urodynamic testing.
- xiii. List points in the nonpharmacological treatment of urinary incontinence and Kegel exercises.
- xiv. List and explain the medications useful for urinary incontinence.
- xv. Tell about surgical treatments of urinary incontinence.
- xvi. Define the use of vaginal pessaries for urinary incontinence.
- xvii. List the uses and risks of Foley catheters in urinary incontinence.

22. Vascular Disease and Edema

Reading Assignment:

- Hazzard's Geriatric Medicine and Gerontology, Chapter 81
- <https://emedicine.medscape.com/article/460178-overviewhttps://www.medscape.com/viewarticle/567029>
- <https://emedicine.medscape.com/article/462579-overview#a7>
- <https://www-clinicalkey-com.vcom.idm.oclc.org/#!/content/book/3-s2.0-B9780323221481000128>
- <https://www-clinicalkey-com.vcom.idm.oclc.org/#!/content/playContent/1-s2.0-S0263931910000220>
- <https://www.aafp.org/afp/2013/0715/p102.html>

Learning Objectives:

- a. Delineate the epidemiology of peripheral vascular disease (PVD)
- b. Define the key areas in the history and physical exam about PVD
- c. Define the differential of PVD and appropriate history of this differential.
- d. Discuss the pathophysiology of PVD
- e. Inculcate the prognosis of PVD
- f. Discuss the treatment of PVD
 - i. Medical
 - ii. Surgical
- g. Varicose veins (VV)
 - i. Discuss the epidemiology of VV
 - ii. Define the clinical signs of VV
 - iii. Discuss the diagnosis of varicose veins
 - iv. Define the treatment of VV
 - a) Medical
 - b) Minimally invasive

- c) Surgical
 - h. Develop a knowledge of the causes of lower extremity edema through the history, physical exam and appropriate diagnostic test; that will result in appropriate therapy of the underlying cause.

Osteopathic Manipulative Medicine and the Osteopathic approach to clinical cases are covered in the monthly workshops and tested on the OMM end-of-rotation exams. Students are responsible for reviewing the OMM Syllabus and meeting the learning objectives covered in each month's workshop.